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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,487	12/15/2003	Robert Hong Leung Chiang	9930A	3809

7590 09/16/2005

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EXAMINER

ALI, MOHAMMAD M

ART UNIT	PAPER NUMBER
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3744

DATE MAILED: 09/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/736,487	Applicant(s) CHIANG ET AL.	
	Examiner Mohammad Ali	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 6-11, 13-14, 16 and 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Renard (5,502,979) in view of Kutscher et al. (6,378,605). Renard discloses a refrigerated display cabinet comprising an insulated (a refrigerated cabinet is inherently insulated) cabinet 50 defining a product display area/shelves 1 maintained in a refrigerated condition at a temperature above 32 degree F (refrigerated space excluding freezer space is obviously at a temperature above 32 degrees F) and having a compartment 37 separate from the product display area 1 an evaporator 28 disposed in the compartment 37; at least one air circulator 29 disposed within the compartment 37 in cooperative relationship with the evaporator 28; and an air circulation circuit (23-26) connecting the product display area 1 and in direct air flow communication with the compartment 37. Renard discloses the invention substantially as claimed as stated

above. See Fig. 2. However, Renard does not disclose a relatively high air side pressure drop evaporator. Kutscher et al. teach the use of a high airside pressure drop heat exchanger 10 with fin density ranging from 3 fins to 10 fins per inch in a heat exchanging system for the purpose of controlling pressure drop. Kutscher et al., also disclose a draw through flow by the action of a fan 12. See Fig. 1, column 12, lines 31-67. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the refrigerated display cabinet of Renard in view of Kutscher et al. such that a high air side pressure drop heat exchanger with fin density ranging from 3 to 10 fins per inch could be provided to in order to run a refrigeration system.

Claims 12, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Renard in view of Kutscher et al., as applied to claims 6, 9 and 10 above, and further in view of Navarro (6,145,327). Renard in view of Kutscher et al., and discloses the invention substantially as claimed as stated above. However Renard in view of Kutscher et al., does not disclose a plurality of fans. Navarro teaches the use of a plurality of fans 16 along an evaporator coil 17 in a refrigerated case for the purpose of running a refrigeration system. See Fig. 7. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the refrigerated display cabinet of Renard in view of Kutscher et al., and further in view of Navarro such that a plurality of fans could be provided to in order to run a refrigeration system. For spacing the fan at a specific distance of 2 feet is an obvious design choice of the individual skilled in the art since there is no criticality or unexpected result from it


Response to Arguments

Applicant's arguments, see remarks pages 6-10, filed 08/08/05, with respect to the rejection(s) of claim(s) 6-13 under 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of new prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad Ali whose telephone number is (571) 272-4806. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-4834

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Mohammad M. Ali
September 14, 2005